ONC S&I FRAMEWORK

Coordination and Operations

8/30/2010

Lessons learned from previous standards efforts

» **Standards are not imposed, they are adopted**
  • To improve adoption, you must solve real problems, not abstract ones
  • Engaging the community creates a sense of ownership

» **Standards should be harmonized and commissioned based on clearly articulated priorities**
  • Governance is necessary to coordinate and prioritize

» **Adoption is accelerated by tools including vocabulary registries and easy to use sources for implementation guidance.**
  • Tools improve adoption
  • Make implementation specifications easy to use and, well, specific

» **Keep it as a simple as possible but no simpler - the parsimony principle**
  • Don't boil the ocean
  • Solve real focused, problems

» **Perfection is the enemy of the good**
  • Iteratively improve

Continuing the work

» **Move toward more "computational" implementation specifications (IS)**
  - Scalable processes
  - Ability to develop tools to increase the efficiency of IS development and maintenance
  - The importance of developing IS that are explicit and subject to less interpretation

» **Link use cases and standards from inception to certification**
  - Keep the certification processes tightly linked to the standards and IS processes
  - Support tool development for certification testing
  - Develop the testing for compliance at the same time as developing the standards and IS

» **Integrate multiple SDOs with different expertise across the process**
  - Transport packages
  - Vocabulary
  - Value sets
  - Security

3

S&I Framework Mission

The S&I Framework is the mechanism by which ONC will manage the implementation of specifications and the harmonization of existing health IT standards to promote interoperability nationwide.

The S&I Framework is NOT developing new standards. We are working with organizations throughout the health domain in the U.S. and creating a shared understanding of the requirements for interoperability and documenting that information using UML and NIEM.
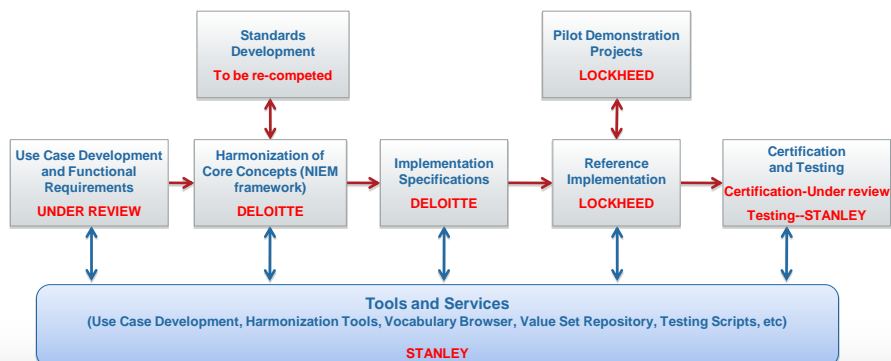
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The benefits of the S&I framework

» **Managing the Lifecycle**: There needs to be a controlled way to manage all the activities within the standards and interoperability activities from identification of a needed capability to implementation and operations

» **Reuse**: Standards development and harmonization efforts need to accommodate multiple stakeholders and business scenarios so as to ensure reuse across many communities.

» **Semantic Discipline**: The work products need to be developed in a way to ensure *computability* and *traceability* throughout the entire lifecycle.

» **Human consensus**: Achieving human consensus is a prerequisite for computable interoperability

5

Contracts Supporting the Framework - Update

» **Contracts are in service to the work that needs to be done. Contracts to individual organizations in no way preclude collaborative work in each of these areas.**
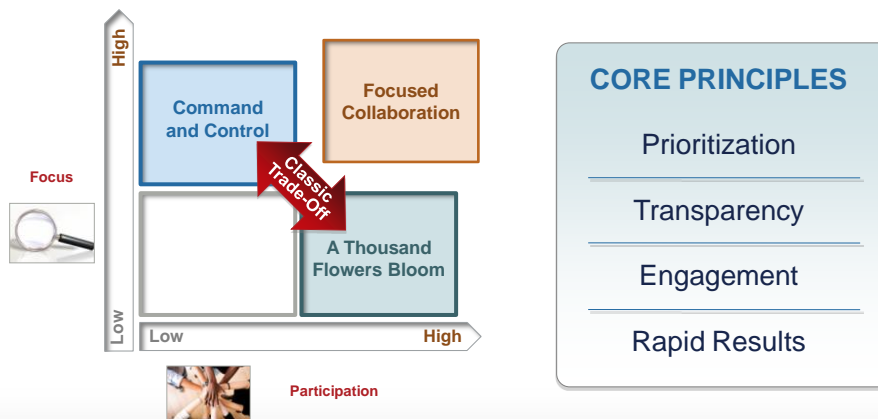
Standards Development
To be re-competed

Pilot Demonstration Projects
LOCKHEED

Use Case Development and Functional Requirements
UNDER REVIEW

Harmonization of Core Concepts (NIEM framework)
DELOITTE

Implementation Specifications
DELOITTE

Reference Implementation
LOCKHEED

Certification and Testing
Certification-Under review
Testing--STANLEY

Tools and Services
(Use Case Development, Harmonization Tools, Vocabulary Browser, Value Set Repository, Testing Scripts, etc)
STANLEY

6

Bottom Up Use Case Development within a Top-down Coordination Framework

NHIN Direct + Interoperability Framework = Focused Collaboration

CORE PRINCIPLES

Prioritization

Transparency

Engagement

Rapid Results

Government's Role

The Government is a PLATFORM to support the work. It provides a neutral ground for collaboration among a broad set of stakeholders
An example of this collaborative approach can be found in the NHIN Direct Project:

NHIN Direct Project: The standards and specifications are being developed using rapid iteration, development of working implementations, and continuous feedback from real-world usage, in an open process allowing for a wide set of participation.

– **Implementation Workgroup:**
  • Participates via formal meetings
  • Commits to active involvement and to deployment of resulting standards and specifications in real-world implementation
  • Serves as the scope arbiter for first implementation
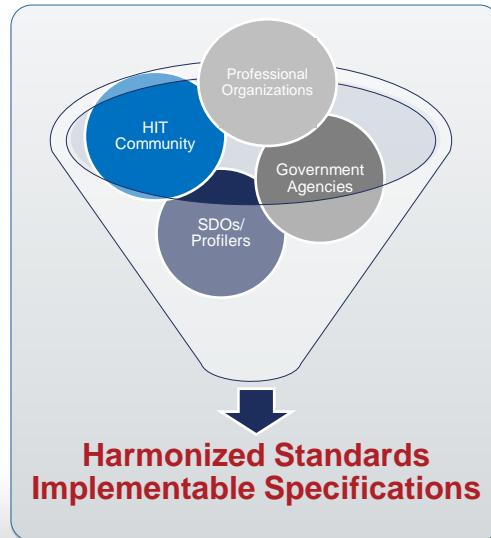
– **Full Community:**
  • Participates via comment, public participation, blogs & wikis, code contribution
  • Invited to deploy resulting standards and specifications

ONC S&I Framework - Approach

» **Current HIT Standards' development participants, methods, artifacts and existing SDO collaborations are foundational to S&I Framework governance, processes, and harmonization efforts**

Professional Organizations

HIT Community

Government Agencies

SDOs/ Profilers

Harmonized Standards Implementable Specifications

9

ONC S&I Framework - Scope

Standards used to share clinical information such as clinical summaries, prescriptions, and structured electronic documents

Content Exchange Standards

Vocabulary Standards

Standard nomenclature and code sets used to describe clinical problems and procedures, medications, and allergies

Standards used to establish the communication protocol between systems

Transport Standards

Privacy and Security

Standards which relate to and span across all of the other types of standards, e.g., authentication, access control, transmission security, and encryption.

10

ONC S&I Framework – Challenges

S&I Framework must address complex challenges

Challenge	Strategy
Existence of disparate health information exchange standards, specifications and approaches to implementation	Map exchange requirements to existing standards & specifications and address any gaps, duplications, or overlaps
'Usability' of existing HIT standards and specifications	Document issues from implementers' perspective and use that information to drive improvement efforts, leveraging best practices
Anticipated S&I Framework requirements likely to exceed existing NIEM processes, tools and artifacts.	Collaborate with NIEM to adapt and extend tools and processes
Harmonization and management of vocabularies and value sets required for interoperability.	Leverage existing vocabulary repositories and collaborate with standards development organizations
Supporting balanced and effective participation of HIT stakeholders	Promote avenues to facilitate participation of experts through existing HIT organizations

11

ONC S&I Framework – Coordination

» **Coordination across three categories**
  • Strategic – alignment toward achieving goals
  • Operational – effectively prioritize and manage the work
  • Technical – model driven approach and tools development

» **Top down approach needed to establish goals and an acceptance process**

» **Bottom up approach needed to establish collaboration and involvement of the standards community.**

» **Establish the S&I Framework as a Standards Collaboration Organization**
  • Contractor support to establish infrastructure and run initial operations
  • Coordinate standards community participation

12

Developing ONC S&I Framework Operational Processes

» **Success of the S&I Framework as a self-sustaining, transparent, and repeatable set of operations should address known challenges and goals:**

- Establish a problem oriented approach to identifying, prioritizing and executing activities
- Developing or adopting/adapting processes to ensure collaboration and transparency among existing organizations
- Identifying avenues which will facilitate stakeholder engagement
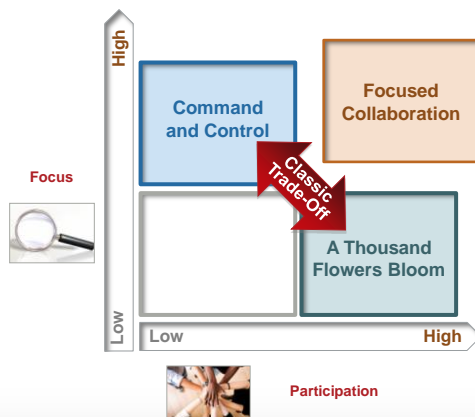- Provide infrastructure for strategic, operational, and technical coordination that will produce rapid results

13

Bottom Up Use Case Development within a Top-down Coordination Framework

NHIN Direct + Interoperability Framework = Focused Collaboration

High

Command and Control

Focused Collaboration

Classic Trade-Off

Focus

A Thousand Flowers Bloom

Low

Low **High**

Participation

CORE PRINCIPLES

Prioritization

Transparency

Engagement

Rapid Results

14

7

Discussion